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# Race and Recall: the Effect of a Patient's Skin tone on the Ability of a Psychologist in Training to Recall Clinical Data

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RACE AND RECALL: THE EFFECT OF A PATIENT'S SKIN TONE ON  
THE ABILITY OF A PSYCHOLOGIST IN TRAINING  
TO RECALL CLINICAL DATA

BY

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Submitted in partial fulfillment of the  
requirements of the degree of Doctor of Philosophy  
Seton Hall University  
2001

## **ABSTRACT**

### **RACE AND RECALL: THE EFFECT OF A PATIENT'S SKIN TONE ON THE ABILITY OF A PSYCHOLOGIST IN TRAINING TO RECALL CLINICAL DATA**

This study attempts to examine skin tone bias and its effects on the ability of psychologists-in-training to recall pertinent clinical details from a case study. The premise of this study is that countertransferential material related to skin tone bias will cause the psychologist-in-training to recall information from a case study incorrectly or not at all. This investigation of skin tone bias in mental health was developed utilizing several key areas of research, bias as a countertransferential element in the therapeutic process, research in racially bias clinical diagnosis, and memory factors in the clinical judgment process.

This study attempts to examine the relationship between information processing and the manifestation of skin tone bias. A quasi-experimental design is employed using an analogue situation in which psychologists-in-training view a photograph in which the patient's skin tone has been altered and read a case study regarding the patient pictured in the photograph. The participants are then exposed to a time delay during which they preform a cognitive task that is different in nature to the first task of reading the case study. After the time delay, participants are asked to recall details about the case. This paradigm addresses memory factors in psychotherapy, an area under-represented in the racial bias literature.

The conclusion of this study is that most clinicians-in-training adequately encode information that is presented to them. Recommendations for the continued study of skin tone bias include: (a) a need to more accurately represent the physical characteristics that may contribute to the phenomenon of skin tone bias, (b) the further exploration of the relationship between time, racial bias and accurate recall, and (c) the investigation of the role of clinical inferences and their contribution to the understanding of how diagnosis and clinical judgments are formed.

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## CHAPTER I

### Introduction

This chapter serves as an introduction to an analogue study of the effect of an African American patient's skin tone on the ability of a psychologist-in-training to recall details of a patient's clinical case. It presents a statement of the problem and a brief description of the research upon which it is based. Hypotheses are included followed by conceptual and operational definitions of terms. This chapter concludes with the significance of the study.

### Background and Significance of the Problem

Underutilization of services and poor satisfaction ratings for treatment of minority patients have been attributed to bias in the delivery of services (Acosta, 1980; Sue, McKinney, Allen, & Hall, 1974). Psychology as a profession understands the importance of fostering awareness of those who differ from "the mainstream" in cultural, ethnic, and racial backgrounds. Graduate programs in psychology all across the United States include courses on cultural, ethnic, and racial diversity; for without the awareness of the differences that exist due to cultural or ethnic backgrounds, a psychologist's diagnosis and treatment of a patient may be affected by misinformation or worse yet ignorance. Awareness however, does not preclude or eliminate bias, and bias may manifest itself consciously or unconsciously. There is still the possibility of the countertransference

process unconsciously effecting the clinician's judgment. The information about a patient that a psychologist remembers, forgets or unconsciously changes in his or her own memory effects the overall clinical picture that a clinician forms and operates from for that patient.

The diagnostic enterprise is a pivotal point in the process of treatment planning and it carries implicit information about the prognosis for the patient. Differential diagnosis of a mental disorder depends on the clinician's ability to gather, weigh, and sift through pertinent information. Research has shown that racial bias on the part of a psychologist can affect the diagnosis and subsequent treatment that a patient receives. For the purposes of this study, we will focus on African American patients in psychological treatment. The majority of the research in the area of racial bias and clinical judgments has focused on the patient's ethnicity or race and the clinical diagnosis. In studies where diagnostic labels are assigned, more severe diagnostic labels are more often given to Black patients than to White patients. Additionally, psychologists ascribe more symptoms to Black patients than to White patients. (Abramowitz & Murray, 1983; Barnes, 1992; Pavkov, Lewis, & Lyons, 1989).

It is not solely being identified as African American that is potentially problematic for the African American patient. Additionally, there is evidence to indicate that an African American person's skin color or tone also affects how that person is perceived by others. Several studies show that the skin tone of an African American person affects their social stratification including education level, income, and economic and social characteristics (Hughes & Hertel, 1990; Keith & Herring, 1991). Anderson and Cromwell

(1977) found that among adolescent African American males light skinned African Americans were considered to be more physically attractive, more intelligent, cleaner, more successful, and more popular than darker skinned African American males.

Few studies have addressed how this bias becomes operationalized and results in a more severe diagnostic label for the African American patient. One possible answer is that an unconscious countertransferential process is affecting the clinician's memory for clinical information which in turn affects how the clinician views and conceptualizes working with African American patients. Additionally, the skin tone of an African American patient may also affect the practitioner's ability to recall pertinent information about a patient thereby affecting the diagnosis and treatment of a patient. Memory errors resulting from an unconscious bias would influence the diagnostic process and the clinician's ability to gather, weigh, and sift through pertinent information.

### Hypotheses and Definition of Terms

This study attempts to examine skin tone bias and its effects on the ability of psychologists-in-training to recall pertinent clinical details from a case study. For the purpose of this study, skin tone refers to the color of the patient's skin, whether light, medium, or dark, and skin tone bias is the clinical judgment of participants which has been affected by the patient's skin color. Psychologists-in-training are defined as students in masters or doctoral level psychology programs. Participants will be given a case study and a photograph depicting either a light, a medium, or darker skinned African American male. All participants will receive the same case study and the same photograph. The

photograph will be altered for skin tone only. This study focuses specifically on skin tone and not other physical indices that may vary with a person's skin tone. Other physical characteristics such as size and shape of the person's nose, size and shape of the person's lips, facial shape, and hair length were not considered. It is recognized that the aforementioned elements when combined with skin tone may more accurately account for the phenomenon of racial bias. However, skin tone bias alone is to be considered in this study. Once participants have had ample opportunity to review the case and the photograph they were asked to complete a questionnaire recalling details from the case.

This study examines skin tone bias and its effect on the ability of a psychologist-in-training to recall clinical details about a patient. It is hypothesized: (a) that psychologists in training regardless of their own racial makeup will recall more information about the male African American patient with the lighter skin tone than the medium or darker skinned patient, (b) that African American psychologists-in-training will recall more information about the patient regardless of the skin tone of the patient than non-African American participants, (c) and that there will be an interaction effect between patient skin tone and the racial identification of the psychologist-in-training.

#### Significance of the Study and Limitations

Evidence of skin tone bias will mean that there is great potential for this bias to impact the diagnosis, treatment planning, and therefore the treatment process.

Demographic statistics describing the characteristics of the members of the American Psychological Association (APA) indicate that 71.1 % of the organization's total

membership is White (APA, 1991). With the prevalence of mental disorders estimated as being higher among African Americans than among Caucasians (Regier, Farmer, Rae, Myers, Kramer, Robins, George, Karno, & Locke 1993), it becomes increasingly important that Caucasian psychologists make themselves aware of their own racial bias. It would be difficult for a clinician to contribute to the healing process of a person if they incorrectly recall or are unable recall critical information about that person's life experiences. The trust and confidence needed to work together and produce change will be significantly undermined. Patients may not feel understood or listened to and the optimism needed by both the clinician and the patient for successful treatment in psychotherapy will be lost (Frank, 1961).

If a bias for skin tone or race exists that could effect clinical judgment, training programs will need to sensitize trainees to the possibility of racial bias and skin tone bias in clinical practice. Externship and internship training supervisors will need to help trainees ask questions of their patients and themselves that will help them to identify possible areas where racial and skin tone bias are effecting the treatment process.

## CHAPTER II

### Review of the Literature

This investigation of skin tone bias in mental health was developed utilizing several key areas of research. The following review will begin with a discussion of the research in the area of racial and ethnic bias in the therapeutic process specifically counter-transference, and research in clinical diagnosis. The second area of research examined is that of skin tone bias. This chapter concludes with a discussion of memory factors in the clinical judgment process.

#### Racial and Ethnic Bias in the Therapeutic Relationship

Considerable attention has been given in the literature to the delivery of mental health services to minority patients. Over the past thirty years the relationship between ethnicity and the psychotherapeutic process has been examined from a variety of perspectives including, quality of treatment, forms of treatment, and diagnosis. While outcomes have been inconclusive to support that services are unequivocally biased against racial and ethnic minorities (Abramowitz & Murray, 1983), there is some evidence of differential treatment and/or outcomes for minority patients (Jones, 1982; Loring & Powell, 1988; Solomon, 1992.) Research has documented that minority groups as a whole tend to be more fearful or uncertain about mental health services (Lin, Inui, Kleinman, & Womack, 1982; Scheffler & Miller, 1991; Sussman, Robins & Earls, 1987).



They experience the mental health profession as a product of White, European culture founded on research done predominately on White, European populations. Most of the clinicians they encounter represent a White middle-class orientation, with its cultural values and beliefs. Along with these values and beliefs comes the White middle-class biases, misconceptions, and stereotypes of other cultures.

Psychotherapy is not a culture free activity. If the therapeutic relationship is examined from a psychodynamic perspective, the clinician's cultural bias will influence the treatment through the transmission of values in the therapeutic dyad. Sattler (1970) points out that the clinician and the patient may find completely different meanings to a problem based solely on their cultural backgrounds. There may in fact be universal meanings in human expression that transcend cultural contexts such as signs and symptoms of specific mental disorders. However, there are a variety of meanings that are culturally distinctive (Lutz, 1988). For this reason, it is important for the therapist to accept that they bring their own world view into the therapeutic dyad.

Perez Foster (1998) cautions that the psychotherapeutic frame does not shield the clinician from the subjectivity of their inner life. Several writers assert that in the area of cross-cultural, cross-racial, and cross-class interactions in the clinical setting, clinicians may not be fully aware of their own countertransferential influence on the relationship (Altman, 1995; Javier, 1990; Mays, 1985; Thompson, 1989). Traditionally, the emphasis has been on the clinician understanding the transference of the patient and it was the job of the therapist to represent clear, objective thinking (Aron, 1991). However as Aron, (1991), Goldstein (1994), Greenberg (1991), and Hoffman (1991), among others, point

out the work in the therapeutic dyad is constructed together and each member is effected by his or her own inner psychological world.

The psychotherapeutic dyad is an interactive construct that responds not only to the transference of the patient but also the countertransference of the clinician. Each clinician brings with them their training, a set of facts, personal beliefs, values, prejudices, bias, and their own sense of ethnic identity into the treatment setting. For the purposes of this study, this constellation will be referred to as “personal knowledge.” Personal knowledge is ever present in the conscious and preconscious domain. The clinician’s negative countertransference experiences of bias and prejudices may be particularly defended against. According to Perez Foster (1998), a variety of resistances work to obscure them from clear conscious awareness. These resistances may include “politically correct leanings” or a “raised consciousness” about cultural diversity.

Just how cultural countertransference effects the process of diagnosis and the formulation of the treatment process is unclear. It is hypothesized in this study that the effects of cultural countertransference on the diagnostic process can be studied by measuring a clinician’s ability to recall details regarding a clinical case. Details that are influenced by the clinician’s negative countertransference will be recalled incorrectly or not at all. It is the conjecture of this study that this process of remembering misinformation and/or forgetting is in fact a manifestation of a clinician’s negative countertransference.

#### Clinician Perceptions and the Diagnosis Process

One area of research in racial bias that has been given significant attention is the area of clinical judgment and the diagnosis. The Diagnostic and Statistical Manual of Mental Disorders (DSM-IV, American Psychiatric Association, 1994) for the most part, overlooks or ignores race in the diagnostic process. The clinician who uses the DSM-IV without consideration of race may also be overlooking critical information. A clinician who overlooks the role of race either in his or herself, or their patient and ignores the role of race in society, runs the risk of reinforcing racial images and stereotypes (Carter, 1995). There is a tendency in psychological literature to measure racial bias in terms of over-pathologizing. For this reason, extensive research has been conducted on the effect of a patient's race on the diagnostic process. Baskin, Bluestone, and Nelson (1981) point out that diagnosis is a classification based on that patient's perceived thoughts, feelings, and behaviors. Therefore, it is effected by the perceiver, specifically the clinician.

The clinician's perception of the patient informs the diagnoses which in turn informs the treatment of the patient. With regard to African American patients, Sue (1977) found that Black patients were more likely to receive a different diagnosis than White patients. Singer (1977) expands on Sue's findings to show that not only do differences exist in diagnosis, but differences between African American and Caucasian patients also exist in a clinician's perception of symptoms and prognosis. Typically, African Americans received a more severe diagnosis, more severe symptoms, and a less promising prognosis. In an analogue study, Wallace (1977) demonstrated that White clinicians tend to assign more severe diagnostic labels to African Americans than to Caucasian patients. Although Strickland, Jenkins, Myers and Adams (1988) found that

African American patients were not rated differently on degree of pathology, they were seen as less articulate and less likely to benefit from treatment than Caucasian patients.

In studies, conducted in hospital settings, where the clinicians were unaware that their clinical judgment was to be used as part of a research study, racial bias toward African Americans has been clearly demonstrated (Baskin, Bluestone & Nelson, 1981; Jones, 1982; Lloyd & Moodley, 1992). Baskin, Bluestone, and Nelson found that African Americans tend to be diagnosed differently than Caucasian patients. Their study showed that African American patients were more likely to be diagnosed as schizophrenic and Hispanic American patients more likely to be diagnosed as depressed. Others have also shown that African Americans are more likely to be diagnosed as schizophrenic (Jones & Gray, 1986.) In a paper summarizing current data in the treatment of African Americans, Baker and Bell (1999), cite over-diagnosis of schizophrenia in African Americans as an important psychiatric issue.

While archival research in inpatient psychiatric settings tends to indicate that African Americans are over-pathologized, research in outpatient clinical settings does not support this. In several studies involving outpatient clinic records, there was a failure to show over-pathologizing of African American patients (Tomlinson & Cheatham, 1989; Tomlinson-Clark & Camilli, 1995). Snowden and Cheung (1990) report that in comparison to Caucasians, African Americans are under-represented in some outpatient treatment populations and over-represented in public inpatient psychiatric populations. Perhaps the apparent differences in the research on diagnosis can be contributed to the under-representation of African Americans in some out-patient treatment populations.

### Skin Tone Bias

As noted earlier, there is evidence to indicate that an African American person's skin color or tone also affects how that person is perceived by others. Historically, an African American's social status was related directly to their skin color (Hughes & Hertel, 1990.) During the era of slavery in the United States, lighter skinned African Americans were typically the offspring of slave master and slave relations. Light skinned slaves were often given better living quarters, household duties rather than fieldwork, better clothing and food, and educational opportunities. Both Whites and Blacks considered the light skinned African American more attractive (Franklin, 1980; Keith & Herring, 1991). Fair skin increased an African American's chances of being accepted by Whites (Hughes & Hertel, 1990).

During the 1960s and into the 1970s, the Civil Rights and Black Pride movements fostered a greater pride among African American people. During this point in history, the phrase "Black is beautiful" became popular (Keith & Herring, 1991). These movements helped to make darker skin and Negroid features more acceptable. However, several studies continue to show that the skin tone of an African American person affects their social stratification including, education level, income, and economic and social characteristics (Hughes & Hertel, 1990; Keith & Herring, 1991).

There are a number studies that demonstrate differential perceptions of African Americans based on skin tone. Anderson and Cromwell (1977) found that among adolescent African American males, light skinned African Americans were considered to

be more physically attractive, more intelligent, cleaner, more successful and more popular than darker skinned African American males. Boyd-Franklin (1991) demonstrated that skin tone influences how African American women in therapy perceive themselves as well as others. Skin tone was linked to self worth and self-esteem. Among women who were unhappy with their skin tone, Bond and Cash (1992) found that they more often wished that they were lighter skinned than darker skinned.

Research in the area of skin tone bias in psychotherapy is relatively limited. A search of the literature produced only two studies. In an effort to explore how physical and linguistic cues influence clinical judgments, Arroyo (1989), presented a video tape of a professional actress to undergraduate psychology students. The actress varied her accent and her skin color for a total of four different presentations of the same scripted clinical interview. Arroya found that no effect for skin color was demonstrated. Arroyo hypothesized that this was due to a failure to adequately darken the actress' skin.

Noting, the studies by Hughes and Hertel (1990), and Keith and Herring, (1991), researchers Atkinson, Brown, Parham, Matthews, Landrum-Brown, and Kim (1996) hypothesized that skin tone played a role in the racial bias found in earlier psychodiagnostic studies. In an effort to test how skin tone might effect the diagnosis and treatment recommendations of African Americans, they used a single case study and a single photograph of an African American female. The photograph was altered to represent three different skin tones (light, medium, and dark). No statistically significant difference between primary diagnosis and treatment recommendations and the patient's skin tone were found. Once again, failure to find significance was attributed partially to

the inability of the researchers to sufficiently darken the skin of the person in the photo. However, it was noted that African American psychologists participating in the study rated the patient as more physically attractive and likely to benefit from therapy. African American psychologists were more positive about working with the patient than the Caucasian psychologists. And as found in previous studies, Caucasian psychologists more strongly endorsed a more severe mental disorder diagnosis.

### Memory and Clinical Judgment

Memory errors that are made by the therapist early in the clinical process are likely to effect the subsequent clinical treatment process. Psychology as a profession has entered what Follette and Hayes (1992) call "the DSM era." With the advent of managed care, psychologists, like it or not, have moved increasingly toward a behaviorally oriented perspective. This perspective relies heavily on a diagnostic precision that informs treatment planning, what constitutes progress, and ultimately defines treatment outcomes as effective or not effective. While certainly there are problems in relying on diagnostic conceptualizations to inform treatment (Eifert, Evans, & McKendrick, 1990), it is a reality that all psychologists-in-training are faced with whether in research or in treatment.

A clinician's clinical judgment relies on their ability to gather, weigh, and sift through information provided by the patient. It is a decision-making process which involves examining different external facts and a number of ambiguous and subjective elements (e.g., placing a value on emotional events, and estimating the likelihood that a patient will manifest a specific behavior). It is a process subject to a clinician's ability to

remember. Psychologists must encode information then access this information in a form that is usable. Memory errors that are made in the assessment process are likely to have an effect on subsequent cognitive processing and therefore clinical judgments.

Many people believe that memory is like data stored in a computer file. It is considered permanent, and potentially completely accessible. If a memory can not be accessed, it is because we are not looking for the data in the proper file. The fact is that there is no experimental evidence to support this view. In fact, Loftus and Pickrell (1995) have demonstrated in their work on false memories that memories can be acquired by suggestion. Loftus and Schooler (1985) developed a model for memory that incorporates both conscious and non-conscious thought. This model uses a corporate metaphor to describe information processing.

Research on non-racially oriented eyewitness memory is of particular interest because it demonstrates ways in which information is encoded and then recalled. One paradigm, is that in which participants are exposed to a staged incident or audiovisual material presentation and are later asked to recall information about the event. In such research, it has been shown that the participants' memories are influenced by misleading information given to them prior to the event. The result is that this misleading information is recalled quite confidently as fact (Belli, 1989; Loftus, Donders, Hoffman & Schooler, 1989; Loftus & Hoffman, 1989; Loftus and Pickrell 1995). These studies illustrate how prior information or misinformation can interfere with the memory process. Another example is research done by Carlston (1980). Carlston led participants to purposely make positive or negative judgments about a stimulus person. Later when asked to recall details



about that stimulus person, those who were led to make positive judgments recalled more positive details while the reverse was true for the participants led to make negative judgments of the stimulus person. In a similar study, Abreu (1999) primed participants with either neutral or stereotypical words then introduced a brief patient vignette. Participants who were exposed to the stereotypical words rated the patient as less favorable and more hostile than the participants primed with the neutral words.

As noted before, each clinician brings with him or her their personal training, a set of facts, personal beliefs, values, prejudices, bias, and their own sense of ethnic identity which will be referred to as "personal knowledge." This personal knowledge assists the clinician in encoding data. A psychologist's clinical judgment may be influenced not only by the encoding of factual raw data, but also by the interference of the clinician's countertransference personal knowledge on the same raw data. Lopez (1989) notes that the ability of a clinician to distinguish between what is external fact and what is internal inference is a promising area of study.

There is little research on how racial bias affects the clinician's memory in the psychotherapeutic process. Pedley (1994) used a memory research model to investigate how racial bias interferes with memory factors in psychotherapy. Participants in this study were shown a video tape of a patient who was either White or African American. Following the video tape participants completed a free written recall of the videotaped interaction and then completed a multiple choice recognition memory test. Participants were also asked about the credibility of the vignettes and if they would accept the patient in treatment. Pedley believed that more information would be recalled about the White

patient than the African American patient and that more inferential statements would be made about the African American patient. Ultimately, no difference was found in the number or types of inferential statements made about the two patients. While the researcher's initial hypothesis was unconfirmed, some evidence of specific effects of race were found. A greater number of factual statements were recalled and fewer errors were made on the free recall about the African American patient. Additionally, the African American patient was rated more likable but less believable. One component missing from Pedley's research is a time delay between exposure to the video tape and the recall.

A time delay in the recall of information appears to make the information more likely to be subject to the interference of personal knowledge. In research done by Sambonmatsu, Kardes, and Sansone (1991) effects of a time delay were studied by asking undergraduate students to judge attributes of a bicycle. Results showed that initial judgments (no delay) were relatively moderate, and that stronger inferences were made over time. A recent study done by Oliver (1999), uses a time delay to study the influence of race on memory. Both Caucasian and African American participants were exposed to a video newscast about a murder. The newscast featured a wanted poster with either an African American or Caucasian suspect. Participants were asked, immediately after viewing the tape and then again three months later, to pick the suspect from a series of photographs. Oliver found that over time Caucasian viewers were increasingly likely to misidentify African Americans. Additionally, Oliver found that an endorsement of anti-Black attitudes was associated with an increase in the misidentification of African American photographs indicating that personal knowledge had influenced the participants'

memory.

This study attempts to examine the relationship between information processing and the manifestation of skin tone bias. A quasi-experimental design is employed using an analogue situation in which psychologists-in-training view a photograph and read a case study regarding the patient pictured in the photograph. The participants are then exposed to a time delay during which they perform a cognitive task, completing a find the word puzzle, that is different in nature from the first task of reading the case study. After the time delay, participants are asked to recall details about the case. This paradigm addresses memory for clinical details, an area under-represented in the racial bias literature.

## CHAPTER III

### Method

This study investigates whether or not the shade of an African American patient's skin effects the ability of a graduate student in professional psychology to recall details of a patient's case. A 2 x 3 quasi-experimental design measuring differences between groups was used. Participants were assigned to treatment groups in a restrictively randomized manner. Participants were asked to view a picture of a patient and to read a case study regarding the patient in the picture. Once the participants had read the case, they were asked to work on a find the word puzzle for five minutes. When the five minutes were up, participants were then asked to complete a multiple-choice questionnaire which asked them to recall details from the case. The independent variables are the shade of skin of the African American patient pictured in the research material, and the participant's own self-designated racial identification. The dependent variable is the amount of case detail that a participant can recall accurately when presented with a multiple choice questionnaire about the case.

### Participants

The participants for this study are 90 graduate students in professional psychology programs enrolled in masters and doctoral level programs at Seton Hall University, Kean University, and New York University. Sixty participants are Caucasian and 30 are African

American. The schools are located in predominately middle and upper class suburban and urban communities with racially diverse compositions.

Originally, it was hoped that an equal number of Caucasian and African American students would participate in this study. Unfortunately the number of African American students was significantly smaller than anticipated. The American Psychological Association (APA) reports in research conducted in the year 2000 that only 6.4 % of all first year full-time psychology doctoral students are African American (APA, 2000). Of all first year part-time doctoral students in psychology, 11.2% are African American. Caucasian students number 82% for full-time and 79% for part-time first-year doctoral students. The APA reports that of first year students attending masters level psychology programs full-time, 5% are African American and 87% are Caucasian. Of the first year master's level students attending part-time, 9.8% are African American and 83% are Caucasian. In light of these numbers, it was decided that equal sample sizes by participants' race would be difficult to obtain. It was determined that proportionality between treatment groups would suffice for the purposes of this study.

To estimate the sample size for Analysis of Variance (ANOVA) to detect main and interaction effects in factorial design, Cohen's (1988) formula for sample size was used. Using this method, to detect an effect size of .50 for an interaction with 2 degrees of freedom, an alpha level of .05, a beta of .05, and 6 cells required an average cell size of 5 with a total sample size of 35. The sample and cells sizes in this study were beyond this requirement. Cell sizes range from 10 to 20, with a total sample size of 90 participants. The number of participants by treatment level is proportional across rows and columns

which significantly reduces the risk of violating the assumption of independence. A mathematical adjustment is used to compensate for unequal n's when calculating ANOVA.

A letter of recruitment was distributed with the permission of the professor in graduate level psychology classes (See Appendix A). Participants were administered the study protocol either as a group or individually. Four faculty members from Seton Hall University and Kean College offered their class time to allow for the administration of the protocol. As a result, entire classes of students were given an opportunity to participate in this study. Some participants were offered extra credit by their current faculty for their participation in this research project.

### Setting

The study took place in classroom settings. Participants assigned to treatment group one sat on the right side of the classroom and faced the right wall of the classroom. Participants assigned to treatment group two sat in the center of the classroom facing forward. Participants assigned to treatment group three sat on the left side of the classroom facing the left wall. The researcher stood at the front of the classroom and gave instructions to the participants. This seating arrangement makes it less likely that participants will accidentally be exposed to another treatment group's picture yet the arrangement allowed for all participants to be run by one researcher.

### Independent Variables

This is a 2 x 3 quasi-experimental study. The first independent variable is the skin

tone of the patient in the picture included in the treatment packet. Each treatment packet includes an 8 ½ x 11 inch color copy reproduction of a head and shoulders photograph of an African American male patient on a neutral background. The photograph was obtained from "Image100 Ltd" a stock photographic image company. The copyright for the photograph is retained by Image100 Ltd., and its reproduction was permitted under a limited licence. The shade of the skin on the picture has been computer enhanced by a professional photographer so that participants assigned to the first treatment group receive a picture of a fair skinned almost white complexioned African American male (See Appendix C). This group is known as group 1. The second treatment group, group 2, received the same picture yet the skin tone was that of a light-medium brown complexioned male (See Appendix D). The third treatment group, group 3, received the same photograph however, this photograph was that of a darker complexioned African American male (See Appendix E). The man in the third picture is clearly African American. Nothing other than the skin tone has been altered in the picture.

The second independent variable is the participant's self reported racial identification. Specifically, the participant was asked "which racial group do you most closely identify with Caucasian, African American, Latino/Latina or other?" Since many people today may find it difficult to identify specifically as one race or another the wording "most closely identify with" was chosen. The racial categories of "Latino/Latina and other" were eliminated from this study due to lack of sufficient sample sizes for comparison.

### Dependent Variable

The dependent variable is the amount of case information that the participant recalls correctly on a fifteen item multiple choice questionnaire (See Appendix F.) Because this instrument was designed specifically for use with the case in this study, it was necessary to validate it and to screen the questionnaire for potential problems. The case, without the patient's photograph, and the questionnaire were given to ten psychology interns and post-doctoral students of mixed racial backgrounds (1 Jordanian, 1 Chinese, 2 African Americans, and 6 Caucasian participants) to norm for a mean and standard deviation. The mean number correct was 12.52 with a standard deviation of 1.49. No single question was missed more frequently than another. Of the questions missed, no wrong answer was given more frequently than another.

### Procedure

Participants were instructed that this study is concerned with memory for clinical details. Participation was completely voluntary. There were no foreseeable risks or discomforts for the participants involved in this study. However, should a participant experience psychological discomfort as a result of their participation in this study, free short-term counseling (three sessions) was made available for that participant. None of the participants have requested the counseling sessions. A consent form was required of all participants (See appendix B). The participants were informed of their right to withdraw their participation or consent at any point during or after the study. Since race is an independent variable, participants were asked to self identify as one of four racial



classifications, Caucasian, African American, Latino/Latina or other. Randomization to treatment groups was based on self identified racial information. The racial categories of "Latino/Latina and other" were eliminated from this study due to lack of sufficient sample sizes for comparison. Additional demographic information, (i.e., gender, age, and current level of education) were collected as part of the case questionnaire.

Participants agreeing to participate were handed an informed consent form. Participants were asked to follow along as the informed consent form was read aloud to them by the researcher. Participants were instructed that their participation was completely voluntary and that they could withdraw their consent to participate at anytime during or after the study. Once participants signed the form and the form had been collected, participants were restrictively randomly assigned to one of three treatment groups by picking a number from an envelope. The numbered slips of paper in the envelope correspond to the number of participants needed in each treatment group in order to have equal sample sizes. There are six treatment group assignments based on the independent variables skin tone of the patient and participant's self-indicated racial identity. Treatment packets were distributed to the participants based on their restrictively randomized assignment. Participants were also given an index card and a number two pencil.

Each treatment packet contained four manilla envelopes marked A, B, C, and D and was bundled in alphabetical order with a rubber band. Each envelope A is also marked with a number 1, 2, or 3 which indicates the patient's skin tone. On the back of envelope D, the last envelope in the packet, a number is stamped. This served as the

participants numerical identification code. Each participant was assigned a numerical code to ensure their confidentiality. Participants were asked to print their name and assigned code on the index card. The card was collected and participants were informed that it would be stored in a locked filing cabinet in the researcher's office. This code was kept so that participants could withdraw their participation anytime after they have completed the study. None of the participants withdrew from the study.

Each treatment packet included a color copy reproduction of a photograph of an African American male in envelope "A," a case study in envelope "B," a "Find the Word" puzzle (See Appendix G) in envelope "C," and a questionnaire regarding the details of the case and a scantron sheet to record the participants answers to the questionnaire were in envelope "D." All three treatment groups received the identical factitious case study of an African American male patient who presents with symptoms of Dysthymic Disorder (See Appendix H).

Prior to its use in this study, the factitious case was given to two licensed psychiatrists, two licensed psychologists, and two licensed clinical social workers. This was done to ensure that the case presentation met the diagnostic criteria for Dysthymic Disorder. This group of experienced clinicians were asked to read the case and render a diagnosis for the patient. During the first attempt to validate the diagnosis, four of the eight respondents diagnosed the patient as having Major Depressive Disorder. Two of the respondents rendered a diagnosis of Schizoaffective Disorder. The final two diagnosed him with Dysthymic Disorder. After careful consideration, the opening statement of the case identifying the patient as African American was modified so that the patient's race

was not revealed. Additionally, a statement was added regarding the patient's work performance. Once again the case was given to a new group of two licensed psychiatrists, two licensed psychologists, and two licensed clinical social workers to render a diagnosis. On the second attempt to validate the diagnosis, all six respondents agreed that the patient showed symptoms of Dysthymic Disorder. Dysthymic Disorder was chosen specifically because the criteria are similar to that of other disorders and requires a differential diagnosis.

Participants were instructed to take seats based on the numerical designation following the letter A on the front of their research packets. Participants were instructed to remove the rubber band and from their packet and open envelope A. The researcher stated "Envelope A contains the picture of a patient whose case you are about to read. Please place the picture on the desk or table in front of you." Participants were then instructed to open envelope B. The researcher stated "Envelope B contains the case of the person whose picture you have in front of you. Please read the case and when you are finished return the case to envelope B so that I know you are done reading the case." Sufficient time was given so that all participants could complete the task of reading the case.

Once all participants returned the case to envelope B, participants were instructed to return the picture to envelope A. The order of the instructions was designed to maximize the length of time that the participant was exposed to the photograph of the patient. When all participants returned the materials to the proper envelopes, the researcher instructed the participants to open envelope C. The researcher stated, "In

envelope C you will find a "Find the Word" puzzle. Please remove the puzzle and find as many words as you can. You have five minutes to work on the puzzle." The puzzle was used to engage participants in a neutral cognitive task that differed in type from the cognitive task of reading the case study. It also provided a time delay between exposure to the case and picture and the recall of case information. When the five minutes elapsed, participants were instructed to write the number of words that they have found in the top right hand corner of the puzzle and return the puzzle to envelope C.

Participants were then instructed to remove the picture from envelope A and place it on the desk or table in front of them. The researcher then asked participants to remove the questionnaire and the scantron answer sheet from envelope D. Participants were instructed by the researcher, "The following is a questionnaire asking you to recall information about the case. Please answer all questions on the scantron sheet provided. When you are finished, return the questionnaire and scantron sheet to envelope D and the picture to envelope A." The questionnaire is a multiple choice instrument designed to elicit whether or not participants recall specific details from the case which they have read regarding the patient's symptomology, family history, educational background, work history, and social history. As part of the questionnaire, participants were asked to pick from the following choices the racial group that they are most likely to identify themselves with: Caucasian, African American, Latino/Latina, or other. Gender, age, and level of graduate study, master or doctoral level, were also solicited. When all participants completed the questionnaire and returned all materials to the proper envelopes, participants were asked to bundle the envelopes with the rubber band. Treatment packets

were then collected by the researcher.

Following the return of all treatment packets, participants were debriefed regarding the nature of the study. The researcher explained that the study is exploring whether or not a clinician's memory for clinical details is affected by the patient's skin tone. Once again it was explained that the data collected will be used confidentially. In addition, it was explained that knowing whether or not skin tone plays a role in the therapist's ability to retain clinical details could be important in the treatment of the patients. Participants were then be asked if they have questions regarding their participation. There were no questions from participants regarding their participation in the study, however a number of participants expressed interest in the formation of the hypotheses and the study's design.

## CHAPTER IV

### Results

This chapter presents the results of information gathered on 90 participants. Demographic information regarding participants is presented first. Results of ANOVAs computed for the number of correct answers by the participant's race and the patient's skin color as well as ANOVAs for a question by question analysis are presented. This chapter concludes with a report of Chi Square calculations for diagnosis by the participant's race and the patient's skin color.

#### Demographic Information for Participants

Participants were 90 graduate students enrolled in doctoral or master's level psychology programs at Seton Hall University, Kean University, and New York University. Randomization to treatment groups is based on self-identified racial information. Participants were asked to self-identify as one of four racial classifications, Caucasian, African American, Latino/Latina, or other. The racial categories of "Latino/Latina and other" were eliminated from this study due to lack of sufficient sample sizes for comparison. The total number of Caucasian participants is 60 with 20 Caucasian participants being restrictively randomly assigned to each of the three treatment groups for the patient's skin color, light, medium, or darker skinned. The total number of African American participants is 30 with 10 African American participants being restrictively

randomly assigned to each of the three treatment groups for the patient's skin color. The number of participants by treatment level is proportional across rows and columns which significantly reduces the risk of violating the assumption of independence.

Cell  $n$ 's are said to be proportional if for each separate level of the row variable (i.e., the A variable) the ratios of cell  $n$ 's to respective total column  $n$ 's are equal (there are  $b$  such ratios per level of A). Alternately, proportionality exists if for each level of the column variable (i.e., B), the ratios of the cell  $n$ 's to respective total row  $n$ 's are equal. (Kennedy & Bush, 1985).

If they had not been proportional the sums of squares would not be independent. Because cells are proportional in this study, the only requirement is a slight mathematical adjustment, when calculating ANOVA to compensate for unequal  $n$ 's.

Eighty-seven percent of the Caucasian participants are female and 13 percent are male. Sixty-seven percent of the African American participants are female and 33 percent of them are male. A higher percentage of the participants are male in the African American group. Among Caucasian participants, 97 % are masters level students and 3 three percent are doctoral level students. Among African American participants, 83 % are masters level students and 17 % are doctoral level students. In both the Caucasian and the African American participant groups, the doctoral level students were spread fairly evenly across the three levels of patient skin tone. The average age of both the Caucasian participants and African American participants is 32 years with a standard deviations of 9.7 and 7.8 years respectively. Ages were obtained in ranges which are reported with

their respective frequencies and percentages in Table 1.

Table 1

Age for Participants

	Age	Frequency	Percentage
Caucasian	20-29	35	58%
	30-39	10	17%
	40-49	12	20%
	<u>50-59</u>	<u>3</u>	<u>5%</u>
	Total	60	100%
African American	20-29	12	40%
	30-39	14	47%
	40-49	3	10%
	<u>50-59</u>	<u>1</u>	<u>3%</u>
	Total	30	100%

Analysis of the Number of Correct Answers

A 2 X 3 between-groups analyses of variance (ANOVA) were performed on the total number of correct answers to the fifteen item information recall questionnaire. Independent variables consisted of the participant's race, (Caucasian or African American), and the patient's skin tone (light, medium, or darker.) Analyses were performed using SPSS 9.0 for Windows weighting cells by their sample size to adjust for unequal n's. Because the number of participants by treatment level is proportional across rows and columns, the risk of violating the assumption of independence is significantly reduced.



Results of the evaluation of assumptions of normality of sampling distributions, linearity, homogeneity of variance, and homogeneity of covariance were satisfactory. There are no outliers present. All 90 cases contained complete responses to the 15 item information recall questionnaire and to the demographic information questions. Two cases did not include a diagnosis and were excluded from the Chi Square analysis.

It was hypothesized: (a) that psychologists-in-training regardless of their own racial makeup will recall more information about the male African American patient with the lighter skin tone than the medium or darker skinned patient, (b) that African American psychologists-in-training will recall more information about the patient than Caucasian participants regardless of the skin tone of the patient, (c) and that there will be an interaction effect between patient skin tone and the psychologist's-in-training racial identification. None of these hypotheses were supported by the findings of this study. No statistically significant effects for the patient's skin tone, the participant's race, or the interaction of these two independent variables were found at the alpha equals .05 level of significance (See Table 2).

Table 2

ANOVAs for Total Number of Questions Correctly Recalled

Source	Sum of Squares	df	Mean Square	F
Skin Tone	3.233	2	1.617	.465
Participant Race	6.050	1	6.050	1.739
Interaction	1.633	2	.817	.235
Error	292.250	84	3.479	
Total	302.400	89		

$p > .05$

Although no statistical significance was found for the total number of correct answers, a trend between skin tone levels was observed for African American participants. The levels of skin tone appeared to have little or no effect on the amount of information that Caucasian participants recalled about the patient. The mean and standard deviation for the amount of information recalled remained relatively stable. However, among the African American participants, the mean amount of information recalled increased as the patient's skin tone became darker (See Table 3.)

Table 3

Means and Standard Deviations for Total Number of Questions Correctly Recalled

Race	Skin Tone	<u>N</u>	Min	Max	Mean	<u>SD</u>
<u>Caucasian</u>						
	Light Skin	20	9	15	12.5	1.8209
	Medium Skin	20	8	15	12.8	1.7045
	Darker Skin	20	10	15	12.65	1.5985
<u>African American</u>						
	Light Skin	10	7	15	11.7	2.4967
	Medium Skin	10	9	15	12.1	1.9120
	Darker Skin	10	9	15	12.5	2.0138

A question by question analysis of the fifteen item information recall questionnaire was performed. A 2 X 3 between group analysis was performed on the number of incorrect answers. Independent variables consist of the participant's race, (Caucasian or African American) and the patient's skin tone (light, medium, or darker.) Analyses were

performed using SPSS 9.0 for Windows weighting cells by their sample size to adjust for unequal n's. Results indicate that African American participants were statistically more likely to answer question 14, "The patient's leisure activities include \_\_\_\_\_" incorrectly with  $F(1, 84) = 4.626, p < .05$ . There was no trend in the pattern of wrong answers given. No statistical significance was found for the patient's skin tone or interaction of the patient's skin tone and the participant's race on this question. All other questions were not statistically significant at the alpha equals .05 level.

#### Analysis of Diagnosis

Chi Square analyses for each independent variable, the patient's skin tone and the participant's race, were performed for the dependant variable diagnosis of the patient. The dependant variable has four levels, Major Depressive Disorder, Dysthymic Disorder, Bipolar Disorder and "I would not give an Axis I diagnosis but would consider an Axis II." There was no evidence of a relationship between diagnosis and the independent variable participant's race [ $\chi^2(3) = 2.1832, p > .05$ ]. There was no relationship between the independent variable patient's skin color and the diagnosis given [ $\chi^2(3) = 5.2279, p > .05$ ].

## CHAPTER V

### Discussion

This chapter summarizes and explains the findings of this study. It discusses the convergence of the findings with that of the literature and the implications of these convergences. This is followed by a discussion of the limitations of this study. Possible research needed to clarify these findings and the generalizability of this study are addressed. This chapter concludes with recommendations for future research.

#### Summary of the Findings

This study found that an African American patient's skin tone had no effect on the ability of the psychologist-in-training to recall information about a patient's case. Likewise, the self-identified race (Caucasian or African American) of the psychologist-in-training had no bearing on whether or not the participant was more likely to recall information about the African American patient. The variables of the patient's skin tone and the race of the psychologist-in-training had no interaction effect upon the amount of information recalled. None of the original hypotheses were supported in this study. Although no statistical significance was found, a trend in the mean amount of information recalled by African American participants between the patient skin tone levels was noted. Among the African American psychologist's-in-training, the mean amount of information recalled showed a statistically insignificant increase as the patient's skin tone became

darker. There was no relationship between the diagnosis of the patient and the race of the psychologist-in-training. There was also no relationship between the diagnosis of the patient and skin tone of the patient.

An unexpected result of significance was found in a single item from the fifteen item information recall questionnaire. African American psychologists-in-training were more likely to answer the question regarding the patient's leisure activities incorrectly. There was no other trend in the type of wrong answers given. None of the other questions evidenced a difference in the way it was answered based on the patient's skin tone, the race of the psychologist-in-training or the interaction between these two variables.

#### Interpretation of the Findings

It was difficult to obtain the initially desired 20 participants per treatment group for African American participants for reasons based on the national demographics. After careful consideration, it was determined that a sample size of ten participants per treatment group would provide a sufficient number to detect the desired effect size and would allow for proportionality between the African American participants and the Caucasian participants. With a small statistical adjustment for unequal sample sizes the underlying assumptions of independence would not be greatly effected. Therefore, the sample sizes of 20 Caucasians per treatment group and 10 African Americans per treatment group were deemed adequately large enough to detect an effect without severely violating the underlying assumptions. It is possible that the statistically non-

significant trend noted in the means for the total number of questions answered correctly by African American psychologists-in-training is due to the smaller sample size for African American participants. A larger sample size may reveal a tendency for the means to become more similar.

There appears to be no significant problems relating to the dependent measurement. The questionnaire regarding the case is a fifteen-item objective information based instrument. It solicits responses to factual information provided by the case presented in conjunction with the patient photograph. Only one of the items, the item regarding the leisure activities of the patient, appears to have elicited a response that was significant across race. It is unclear as to why the question concerning the leisure activities of the patient produced this result.

One consideration regarding the recall of information is that the multiple choice format may have aided the memory of the participants. A multiple choice format tests, more accurately, recognition. While this format certainly provided an easy assessment and scoring, it is not consistent with the way that clinical data is collected and physically processed. A fill in the blank format may have provided a greater opportunity to assess actual recall verses recognition.

Perhaps the most obvious factor to consider in the interpretation of these results, is the skin tone of the patient in the photograph. The process of successfully darkening a photograph without distortion requires that the facial features of the person in the photograph be relatively free of shadows. As the picture is darkened, the shadows that exist deepen. As a result, heavy shadowing begins to appear as the photograph is

successively darkened. At some point, it becomes impossible to darken the photograph without obvious distortions particularly around the eyes, nose, and lips of the person appearing in the photograph.

The photographs in this study begin with the original photograph in which the patient appears to be almost white. This is the light skinned patient in treatment group number one. The second photograph depicts a patient that is more clearly African American yet his skin is also fairly light. This is the medium skinned patient in treatment group two. The third photograph depicts someone who is without question African American yet the skin tone is not very dark. For this reason this photograph is referred to as the "darker skinned patient" of treatment group three. Subsequent darkening of the photograph produced an image that contained distortions around the nose, lips, and eyes. These distortions made the photograph at these darker levels unusable. It is not known whether or not the participants in this study perceived the patient in treatment group three as a dark skinned patient. Future research should assess the participants' perceptions of the skin tone of the patient.

Unfortunately, the inability to produce a photograph that more accurately represents the darker skin tones found naturally in the African American and Caribbean American populations, limits this study. This may account for the inability to produce results that were of any significance. It does however raise questions about the statistically non-significant trend of means for the total number of questions answered correctly by African American psychologists-in-training. Besides the possible explanation that this trend would disappear if sample sizes were increased, it is possible that the



lighter skin tone of the patient who is identified as African American in the opening sentences of the case study is incongruent with the unconscious visual expectations of the African American participants. If this is the case, as the skin tone becomes darker congruency between the unconscious visual expectation and the photograph would be reached. This could result in a greater amount of information being recalled.

The protocol for this research project called for participants to be exposed to the photograph of the patient for a second time while answering the multiple choice questionnaire. The purpose of the second exposure to the photograph was to provide a visual prompt during the recall. It was suspected that the visual prompt might influence the participants' ability to recall the information from the case. It is possible that the second exposure to the photograph actually enhanced the recall of the participants. Further research would be necessary to assess the extent to which the second exposure to the patient's photograph effected the participants' memory.

Additionally, the five-minute time delay between the activity of reading the case study and responding to the fact-based questionnaire may be insufficient to allow for the "personal knowledge" of the psychologist-in-training to effect the recall. Again, for the purposes of this study personal knowledge is defined as the clinician's training, a set of facts, personal beliefs, values, prejudices, bias and the clinician's own sense of ethnic identity. It has been shown that over time a person's subjective experiences are more likely to effect their ability to recall information (Sambonmatsu, Kardes, & Sansone 1991.) It is possible that the five-minute delay did not provide an adequate amount of time for the process of recall to be effected by bias related countertransferential material that the

patient's photograph might have elicited.

Finally, it is possible that the skin tone of the patient really does not have an effect on the psychologist-in-training and the amount of case information that they are able to recall. If we accept this, then the findings of this study indicate that most clinicians-in-training adequately encode information that is presented to them and that the recall of this information is relatively free of bias. It would appear then that the tendency of Caucasian psychologists to over-diagnose African American patients is unrelated to the process of recalling clinical information.

#### Convergence of the Findings and Implications

Although this study does not replicate Pedley's (1994) study on clinicians' memory, the findings of this study confirm those of Pedley. In an attempt to use a memory research model to investigate how racial bias interferes with memory factors in psychotherapy, Pedley showed participants a video tape of a patient who was either White or African American. Pedley believed that more information would be recalled about the White patient than the African American patient. There was no time delay before participants were asked to recall clinical information in Pedley's design. Ultimately, no difference was found in the amount of information recalled about the two patients.

While Pedley's (1994) study was designed to measure differences in how clinicians recalled information about a Caucasian patient and an African American patient, the same idea of recalling information was applied in this study across different patient skin tones. An attempt was made to address the lack of a time delay in the recall of information seen

in Pedley's study. The time delay, in this case five minutes, would theoretically allow more time for the participant's "personal knowledge" to impact the memory of the clinical case information. Likewise, the current study found no difference in the amount of information recalled across patient skin tone. It also found no difference across the race of the psychologist-in-training.

The findings of this study also are supportive of the findings of Atkinson, and colleagues (1996). In their study, the patient's skin tone was manipulated. They found no statistically significant difference between the primary diagnosis and the treatment recommendations and the patient's skin tone. Their failure to find significance was attributed partially to the inability of the researchers to sufficiently darken the skin of the person in the photograph. Unfortunately, the inability to sufficiently darken the photograph of the patient was also a problem faced in this study. None the less, the findings of this current study are consistent with those reported by Atkinson and colleagues. There is no statistically significant difference across patient skin tone.

There are two possible reasons for the consistency in these findings. One is that skin tone of a patient in reality has no measurable effect on a clinician's memory and the second is that this study replicates problems found in earlier studies thereby rendering it ineffective at measuring the phenomenon of skin tone bias.

#### Limitations and Generalizability of the Study

The original proposal for this study included covariates of gender and education level. The participant demographics however made these covariates impractical for use in

this study. Eighty-seven percent of the Caucasian participants are female and 13 % are male. Sixty-seven percent of the African American participants are female and 33 % of them are male. Among Caucasian participants, 97 % are masters level students and three percent are doctoral level students. Among African American participants, 83 % are masters level students and 17 % are doctoral level students. The low numbers of males in this study as well as the low numbers of doctoral students forced the elimination of these covariates in the analysis. Additionally, more demographic information about the participants may have been useful. Information about the participant's years in training in addition to their current class placement, level of practical clinical experience, and the number of courses taken in cross cultural and multi-cultural issues in psychotherapy may have provided more clarity in interpreting the results of this study.

Participants in all three levels of the independent variable patient's skin tone were administered the study material in the same room. Participants assigned to treatment group one sat on the right side of the classroom and faced the right wall of the classroom. Participants assigned to treatment group two sat in the center of the classroom facing forward. Participants assigned to treatment group three sat on the left side of the classroom facing the left wall. While these logistical adjustments were made to minimize the likelihood that participants would be exposed to more than one photograph of the patient, accidental exposure may not have been prevented in this arrangement. It is not known if participants were accidentally exposed to other levels of the patient's skin tone. Optimally, participants in each of the three treatment levels would be in three separate rooms.

Originally, the diagnosis of the patient was to be considered as a sub-study within the main study. During data collection, a number of masters level participants expressed concern that they had not yet had sufficient course work to give an accurate diagnosis for the patient in the case study. This occurred on four separate occasions, three of which involved administrations to groups of 20 to 25 people in which the entire group was exposed to the raised concern. Participants were encouraged to give a diagnosis to the best of their ability. Additionally, it would have been helpful to know the participants' level of clinical experience in order to better assess the validity of the diagnostic impressions. For this reason, the data on diagnosis is not generalizable. The multinomial analysis planned for this data, logit regression, was not performed because 15 of the 36 cells for the analysis fell below the required frequency of five. Two of these cells had frequencies of zero.

Very little research has been conducted on skin tone bias. It is unclear whether or not skin tone bias can be assessed, at least at this point in time, through an analogue study. As technology advances, it will be clearer whether or not is possible to duplicate the darker skin tones found in the African American and Caribbean American populations. Currently, there are problems with shadowing and distortion when manipulating skin tone in a photograph.

As previously stated, this study focused specifically on skin tone and not other physical indices that may vary with a person's skin tone. Other physical characteristics such as size and shape of the person's nose, size and shape of the person's lips, facial shape, and hair length combined with skin tone may more accurately account for the

phenomenon of racial bias. For this reason the study's findings may not accurately represent a measure for skin tone bias.

This study focused on the measurement of recalled factual information. It solicited responses to a fifteen-item multiple choice questionnaire. Items were taken from information provided in the case study. One of the premises of this study is that countertransfereal material related to skin tone bias will cause the participant to recall the case information incorrectly or not at all. An additional measurement assessing inferential statements made by the psychologist in training about the patient may provide the key to more accurately evaluating skin tone bias in psychotherapy. Inferential statements will allow for a more natural outlet for countertransfereal material to emerge. It may be that factual information has little to do with the differences observed by Baskin, Bluestone, & Nelson (1981); Jones (1982); and Lloyd & Moodley (1992) in the diagnosis of Caucasian and African American patients. Perhaps it is the inferences, often unspoken or unrecorded, that lead to the differences in diagnosis observed in these studies.

#### Future Directions for Research

If the current methodology were to be employed in the future, several areas should be addressed. First, the analogue study of skin tone bias in psychotherapy is hampered by the limitations of the current technology for manipulating skin tone on photographic images. Future research in this area should make a concerted effort to ensure that darker skin tones are more adequately represented. Additionally, the phenomenon of skin tone

bias may be better represented by a combination of physical characteristics such as skin tone, size and shape of the person's nose, size and shape of the person's lips, facial shape, and hair length. Future research should attempt to incorporate the manipulation of facial features.

Second, the time delay between the presentation of the case and photograph and the recall should be expanded. One premise of this study is that countertransferential material related to skin tone bias will cause the psychologist-in-training to recall information from a case study incorrectly or not at all. It has been shown that over time a person's subjective experiences are more likely to effect their ability to recall information (Sambonmatsu, Kardes, & Sansone 1991). It is possible that the five-minute delay did not provide an adequate amount of time for the process of recall to be effected by bias related countertransferential material that the patient's photograph might have elicited. As noted earlier, expanding the time delay between the participant's exposure to the patient's photograph and case material, and the recall of the case material is another area which future research should explore. Allowing for a greater time delay, perhaps 45 minutes, may more closely replicate the way in which data is recorded in clinical settings.

Third, the protocol for this research project called for participants to be exposed to the photograph of the patient for a second time while answering the multiple choice questionnaire. It is possible that the second exposure to the photograph actually enhanced the recall of the participants. Further research would be necessary to asses the extent to which the second exposure to the patient's photograph effected the participants' memory.

Fourth, the recall of information is handled with a multiple choice format. This

format may have inadvertently aided the memory of the participants. A multiple choice format tests, more accurately, recognition. While this format certainly provided an easy assessment and scoring, it is not consistent with the way that clinical data is collected and physically processed. A fill in the blank format may provide a greater opportunity to assess actual recall verses recognition.

Finally, as noted earlier, there is evidence of differential treatment and/or outcomes for minority patients (Jones, 1982; Loring & Powell, 1988; Solomon, 1992). These differences are noted predominately in how patient's are diagnosed and their prognosis for treatment. Simply pointing out our judgment biases rarely result in alleviating them (Arkes, 1981; Faust, 1986). There is surprisingly little research in the area of the specific processes that underlie clinical reasoning that lead to the differences noted. Without continued foundational research in this area, it is unreasonable to believe that any type of bias can be adequately alleviated.

One contribution that this study makes is that most clinicians-in-training adequately encode information that is presented to them. This finding supports the findings of Pedley (1994). So why do differences in diagnosis continue to exist? Discerning what specifically influences a clinician's judgment goes beyond the influence of memory. Continued research in the area of investigating clinical inferences and their sources would contribute to the understanding of how diagnosis and clinical judgments are formed. The current methodology could be used allowing for participants to report on clinical inferences. With this addition, this study's methodology could be used to investigate ways in which skin tone effects the ways in which a therapist arrives at a case



conceptualization.

### Conclusions

This study attempts to examine skin tone bias and its effects on the ability of psychologists-in-training to recall pertinent clinical details from a case study. One premise of this study is that countertransference material related to skin tone bias will cause the psychologist-in-training to recall information from a case study incorrectly or not at all. The findings demonstrate that an African American patient's skin tone had no effect on the psychologist's-in-training ability to recall information about a patient's case. Likewise, the self-identified race (Caucasian or African American) of the psychologist-in-training had no bearing on whether they were more likely to recall information about the African American patient. The variables of the patient's skin tone and the race of the psychologist in training had no interaction effect upon the amount of material recalled. The conclusion of this study is that most clinicians-in-training adequately encode information that is presented to them. Recommendations for the continued study of skin tone bias include: (a) a need to more accurately represent the physical characteristics that may contribute to the phenomenon of skin tone bias, (b) the further exploration of the relationship between time, racial bias, and accurate recall, and (c) the investigation of the role of clinical inferences and their contribution to the understanding of how diagnosis and clinical judgments are formed.

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## **Appendix A**

### **Participant Recruitment Letter**

Cheryl Ann Notari  
537 Hanford Place  
Westfield, NJ 07090

Dear Graduate Student:

My name is Cheryl Notari and I am a doctoral student in Clinical Psychology at Seton Hall University. I am conducting research to complete my degree requirements in the area of memory for clinical details. It is hoped that this research will shed some light on what helps clinicians to remember information about patients. I am writing to solicit participants for this research. Participants must be in a masters or doctoral level psychology program.

Participation in this study is completely voluntary and non participation carries no penalty. Your participation in this research is confidential. You will be given a case study and a picture of a patient. After reading the case, you will be asked to work on a "Find the Word" puzzle. Following the puzzle you will be asked to fill out a multiple-choice questionnaire which asks you to recall details from the case that you have read. It is expected that the entire procedure will take approximately 30 minutes. There are no foreseeable risks or discomforts for participants involved in this study. You may also discontinue your participation at any time during or after the study.

This project has been reviewed and approved by the Seton Hall University Institutional Review Board for Human Participants Research (IRB). The IRB believes that the research procedures adequately safeguard the participant's privacy, welfare, civil liberties, and rights. The Chairperson of the IRB may be reached through the Office of Grants and Research Services. The telephone number of the Office is (973)-378-9809.

If you are interested in participating in this research project, please contact Cheryl Notari at 908-654-4922 no later than \_\_\_\_\_.

Sincerely,

Cheryl Ann Notari  
Doctoral Candidate

**Appendix B**  
**Informed Consent Form**

## **Informed Consent Form**

This study is concerned with a clinician's memory for clinical details. It is being conducted by Cheryl Notari a doctoral student for the fulfillment of the Ph.D. requirements in Seton Hall University's clinical psychology program. You will be given a case study and a picture of a patient. After reading the case, you will be asked to work on a "Find the Word" puzzle. Following the puzzle you will be asked to fill out a multiple-choice questionnaire which asks you to recall details from the case that you have read. The questionnaire will also contain some general participant demographic questions. You will be asked to identify your gender, age, education level and race. It is expected that the entire procedure will take approximately 30 minutes. It is hoped that this research will shed some light on what helps clinicians to remember information about patients.

Your participation will remain anonymous. You will be assigned a numerical code and all records will be referred to by this code. To preserve confidentiality, the key for this code will remain in a locked file cabinet in the researchers office. The researcher will be the only person with access to this cabinet. Your participation is completely voluntary. Refusal to participate will involve no penalty. There are no foreseeable risks or discomforts for participants involved in this study. You may also discontinue your participation at any time during or after the study. Should you experience psychological discomfort as a result of your participation in this study, short term counseling (three sessions) will be provided to you free of charge. Should you have any further questions or should you need to make arrangements for the counseling sessions, you may contact the researcher, Cheryl Notari, by phoning (908)-654-4922.

This project has been reviewed and approved by the Seton Hall University Institutional Review Board for Human Participants Research (IRB). The IRB believes that the research procedures adequately safeguard the participant's privacy, welfare, civil liberties, and rights. The Chairperson of the IRB may be reached through the Office of Grants and Research Services. The telephone number of the office is (973)-378-9809.

I have read the material above, and any questions I asked have been answered to my satisfaction. I agree to participate in this activity, realizing that I may withdraw without prejudice at any time.

---

Printed Name of Participant

---

Signature

---

Date

### Appendix C

Picture for Treatment Group One





## Appendix D

Picture for Treatment Group Two



## Appendix E

Picture for Treatment Group Three



**Appendix F**  
**Information Recall Questionnaire**

### Case Questionnaire

*The following questionnaire relates to the case you were presented with at the beginning of the session. Please circle the answer that is, to the best of your memory, the correct answer. If you cannot recall, circle letter E. Please do not leave any of the questions blank.*

1. How old is the patient?
  - A. 32
  - B. 29
  - C. 34
  - D. 30
  - E. Do not recall.
  
2. The patient currently lives \_\_\_\_\_.
  - A. With his mother.
  - B. Alone.
  - C. With his mother and sister
  - D. With a friend
  - E. Do not recall
  
3. The patient reports the following symptoms.
  - A. Decrease in appetite and difficulty sleeping.
  - B. An inability to get out of bed in the morning.
  - C. A marked disruption in his ability to perform on the job.
  - D. Hallucinations
  - E. Do not recall.
  
4. The patient grew up in \_\_\_\_\_.
  - A. A two household family.
  - B. An intact family.
  - C. Only knowing his mother but never knowing his father.
  - D. A divorced family with no contact with from the father after the divorce.
  - E. Do not recall.

5. In regard to relationships, the patient \_\_\_\_\_
- A. Had a girlfriend for a brief time.
  - B. Has friends but has never had an intimate relationship.
  - C. Has never had a relationship.
  - D. Prefers to remain alone.
  - E. Do not recall.
6. The patient has had a full medical evaluation which has revealed that \_\_\_\_.
- A. The patient has a thyroid problem.
  - B. The patient exhibits no physical reason for his symptoms.
  - C. The patient requires more tests.
  - D. His speech was at times incoherent.
  - E. Do not recall.
7. The patient complained of \_\_\_\_\_.
- A. Hallucinations
  - B. Not being able to work.
  - C. Feeling irritable.
  - D. Being tired all the time.
  - E. Do not recall.
8. The patient's level of education is \_\_\_\_\_.
- A. Some college.
  - B. Some high school.
  - C. College graduate.
  - D. High School graduate.
  - E. Do not recall.
9. The patient's mother \_\_\_\_\_.
- A. Is deceased.
  - B. Is a retired administrative assist.
  - C. Is currently working as a bus driver.
  - D. Is not capable of working.
  - E. Do not recall.

10. The patient's father \_\_\_\_\_.
- A. Is deceased.
  - B. Is a retired bus driver.
  - C. Is currently working as an administrative assistant.
  - D. Is not capable of working.
  - E. Do not recall.
11. The patient's \_\_\_\_\_ had cancer.
- A. Oldest sister
  - B. Youngest sister.
  - C. Mother
  - D. Father
  - E. Do not recall.
12. Who had major depression?
- A. Oldest sister
  - B. Youngest sister.
  - C. Mother
  - D. Father
  - E. Do not recall.
13. What career did the patient hope to pursue?
- A. Something in Law
  - B. Bus Driver
  - C. Teacher
  - D. Something in Broadcasting.
  - E. Do not recall.
14. The patient's leisure activities include \_\_\_\_\_.
- A. Reading
  - B. Parties
  - C. Meeting with friends.
  - D. Television
  - E. Do not recall.



15. Who did the patient take care of for a brief time?
- A. His sister
  - B. His mother
  - C. His father
  - D. His sister and his mother.
  - E. Do not recall.
16. According to DSM IV guidelines, what Axis I diagnosis would you give this patient?
- A. Major Depressive Episode.
  - B. Dysthymic Disorder
  - C. Bipolar Disorder
  - D. I would not give an Axis I but would consider an Axis II Personality Disorder.
17. I am \_\_\_\_\_.
- A. Male.
  - B. Female
18. My age is between \_\_\_\_\_.
- A. 20-29
  - B. 30-39
  - C. 40-49
  - D. 50-59
  - C 60 or older.
19. My level of education is \_\_\_\_\_.
- A. Master's level.
  - B. Doctoral level

20. Of those listed, the racial category that I most identify with is

\_\_\_\_\_.

- A. Caucasian
- B. African American
- C. Latino/Latina
- D. Other

## Appendix G

### Find the Word Puzzle

## Flowers

### Find the Word

Hidden in this diagram is the list of words that appear at the bottom of this page. Hidden words may lie across, down, diagonally and/or backwards, but always in a straight line. Words often overlap, and letters may be used in more than one word. As you find each word, draw a circle around it.

```

O Y S I A D H J A S M I N E
R R G A R D E N I A V S L Y
H P C Z D I A C R O I L M W
T A S H V R T M Y L C I U F
N P U D I I H E L H H D M F
I E C A R D E Y L Y R O S E
C R S H I W R T I D L F E C
A W I L S A U G L R I F S I
Y H B I M L Y N A A P A O S
H I I A I J A E L N Y D R U
E T H P A N S Y L G L M A C
A E S S D I L S A E L A E O
T S T E L O I V C A I R T R
A E L A Z A N E M A L C Y C
  
```

1. Amaryllis
2. Azalea
3. Calla Lilly
4. Crocus
5. Cyclamen

6. Daffodils
7. Dahlia
8. Daisy
9. Gardenia
10. Heather

11. Heather
12. Hibiscus
13. Hyacinth
14. Hydrangea
15. Iris

16. Jasmine
17. Lilly
18. Mums
19. Orchid
20. Pansy

21. Paperwhites
22. Rose
23. Tea Roses
24. Tulips
25. Violets

## Appendix H

### Patient Case

## Case

R is a 34-year-old African American male. He is seeking therapy because he finds that he has "no joy" in his life. Over the past two years he has noticed that he has lost interest in activities that he once found pleasurable. He reports that he has difficulty sleeping and that his appetite has decreased. He has become socially withdrawn, avoiding friends and family. He broods and feels guilty over past events in his life. He feels irritable and finds that he becomes excessively angry. R has indicated that he is less effective and less productive at work. R has also verbalized that he has feelings of inadequacy.

R was awake, reactive, and fully conscious during his interview. He was oriented X3. R's affect is appropriate, his thoughts are logical, and his speech is coherent. He appears to be of average intelligence. There are no hallucinations or delusions present. When asked about suicidal ideation, R admits that he has had fleeting thoughts of suicide, but he insists that he is not suicidal and has never been suicidal. A full medical evaluation revealed R to be a normally developed male. Physical examinations and blood work up, including a thyroid test, revealed no pathology. R reports that the onset of these symptoms occurred at least two years ago and symptoms have not subsided for more than one month. There was a brief time when R met and began to date a woman. Within several weeks time, R reports that the "magic wore off." Subsequently, the relationship ended four months after it began. R is not currently in a relationship. He lives alone in a one bedroom apartment in a suburb of New York City.

R is the oldest of three siblings. He has a sister 32 and another sister 29. R's

mother, now retired, was an administrative assistant for a legal firm. R's father, now deceased, was a bus driver. His parents divorced when he was six years of age. After the divorce was final, R did not see his father again until his high school graduation. During that visit, his father revealed that he had cancer. R saw his father two more times over the next year before he died.

R went to college directly from high school. He studied communications and hoped to obtain a job in television. During R's third year of college, his mother had what he calls a "crisis." During that time, R's mother was diagnosed with major depressive disorder. R dropped out of school to take care of his mother and his youngest sister who was still living at home. R reports that his sister was often in trouble at school for being late and not completing assignments. Her grades were poor and she began staying out late at night. The task of discipline and guidance for his sister often fell to him. Three years after R moved back to his mother's home, his youngest sister moved out. With the sister no longer living there and his mother doing much better, R also moved out.

R currently works as a sales manager for a computer chain store. He works approximately 55 hours a week. R says that he does not mind the work or the long hours. His work attendance is good and his performance evaluations range from good to excellent. He currently does little in terms of recreation or leisure activities. R reports that he is "not much of a party kind of guy." R has several friends that he sees a few times each month. He enjoys reading when he has the time and prefers mystery novels. He hopes to return to college someday to finish his education and enter into a career in broadcasting. R is hoping that by entering into therapy he will begin to find more

enjoyment in life.